

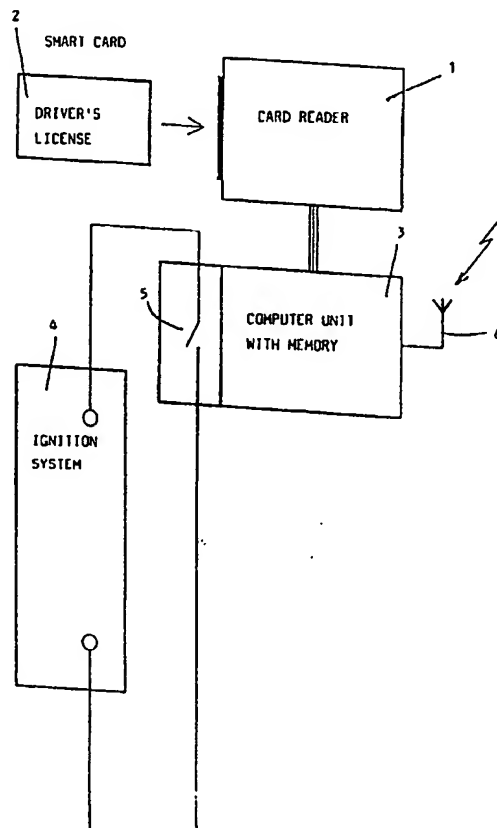


## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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**(54) Title:** APPARATUS IN AN AUTHORIZATION CHECKING SYSTEM FOR VEHICLES**(57) Abstract**

In an apparatus in an authorization checking system for vehicles, comprising a checking unit (1, 3) which is adapted to check whether a driver's license, an operator card or a vehicle card (2), read by the checking unit (1, 3), is programmed in the checking unit (1, 3) as being authorized for driving the vehicle before start of the vehicle is enabled, the checking unit (1, 3) is programmable by means of radio signals.



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## APPARATUS IN AN AUTHORIZATION CHECKING SYSTEM FOR VEHICLES

## TECHNICAL FIELD

The invention relates to an apparatus in an  
5 authorisation checking system for a vehicle, comprising a  
checking unit which is adapted to check whether a driver's  
license, an operator card or a vehicle card, read by the  
checking unit, is programmed in the checking unit as being  
authorized for driving the vehicle before start of the  
10 Vehicle is enabled.

## BACKGROUND ART

A person who has had his/her driver's license  
withdrawn due to the fact that he/she has been driving  
15 intoxicated, can today, without any problem, continue to  
drive without his/her driver's license.

In order to eliminate this problem, different  
authorization checking systems have been proposed.

An example hereof is known from WO 84/03758. In  
20 this known system, the vehicle is provided with a control  
unit which reads an identity card/driver's license in order  
to check whether the driver is authorized to drive the  
vehicle or not. The vehicle can be started only if such  
authorization has been established.

25 WO 88/03884 describes an authorization checking  
system for vehicles where the checking function is integrated  
with the control system for the motor's ignition and fuel  
injection.

From GB 2 218 243 a vehicle security system is  
30 known, which triggers an alarm upon attempts for unauthorized  
use and in which the vehicle can be immobilized by a radio  
signal from e.g. a base station.

US 4,697,171 describes i.a. an electronic lock for  
vehicles, which is combined with an alcohol sensing part  
35 which prevents start of the vehicle in case the driver is  
intoxicated.

## DISCLOSURE OF THE INVENTION

The object of the invention is to bring about an apparatus which not only prevents a vehicle from being started and driven by an unauthorized person, e.g. a person  
5 who for some reason has had his/her driver's license withdrawn, but also simplifies the process of changing the authorization for different persons to operate that vehicle.

Persons without a driver's license or persons who have had their driver's license withdrawn, thus, should not  
10 be able to start and drive any vehicle at all.

This is attained by the above mentioned apparatus according to the invention mainly in that the checking unit is programmable by means of radio signals.

Thus, in connection with e.g. a withdrawal of a  
15 driver's license, the vehicle does not have to be handed over to e.g. the police authority for reprogramming the checking unit, which is of great advantage. Also, it will be simple to reprogram the checking unit so that no one is authorized to drive a certain vehicle in case vehicle tax and/or insurance  
20 has not been paid for the vehicle in question or the vehicle has not been inspected within a prescribed period of time.

## DESCRIPTION OF DRAWING

The invention will be described more in detail  
25 below with reference to the attached drawing on which the single figure shows a block diagram of a preferred embodiment of the apparatus according to the invention.

## PREFERRED EMBODIMENT

30 The figure shows a block diagram of an apparatus according to the invention in an authorization checking system for vehicles.

1 denotes a card reader, known per se, for reading driver's licenses, operator cards or vehicle cards, in the  
35 following all called driver's licenses, in order to check whether the driver's license read, authorizes the bearer of the driver's license to operate the vehicle in question.

2 denotes a driver's license which is in the form of an electro-magnetic, electronic or electro-optical card of a type known per se, which is inserted into the card reader 1 which is mounted on the dashboard (not shown) of the vehicle or in another place which is easily accessible to the driver.

The card reader is associated with a computer unit 3 with a memory which is preprogrammed to authorize certain driver's licenses to operate the vehicle, e.g. the driver's licenses belonging to members of one the same family.

The driver's license 2 can replace the ignition key of the vehicle, whereby the vehicle can be started in that the card 2 e.g. is pushed further into a card reader 1. Alternatively a vehicle may be started by pushing a separate button. Of course, the card 2 can also be a complement to a key, and also be associated with a keyboard for keying in a code in connection with the reading of the card.

The computer unit 3 is in manner known per se connected to the vehicle ignition system which in the figure is merely indicated schematically by means of block 4.

That the ignition system 4 is enabled when an authorized driver's license 2 is read by the card reader 1 and checked by the computer unit 3, is schematically indicated in the figure by the switch 5 which is closed only after that the computer unit 3 has verified the authorization of a driver's license 2 inserted into the card reader 1.

According to the invention, the computer unit 3 is remotely programmable by means of radio signals as indicated by an antenna 6.

By means of such a computer unit, e.g. the authorization of a new owner of the vehicle can be remotely programmed by e.g. the police authority or some other authority when the change of owner is reported without the new owner having to appear with the vehicle at the authority in question.

In case the vehicle in question has been stopped in a manner known e.g. from the above GB 2 218 243 by means of a radio signal in connection with e.g. a theft, a new

authorization can be programmed by a radio signal from the police authority for a certain authorized person to be able to pick up the vehicle.

Thus, by means of the apparatus according to the  
5 invention, the reprogramming will be easier in case it is desired to prevent someone from operating the vehicle as well as in case it is desired to authorize a new person to operate a vehicle.

According to the invention, the memory of the  
10 computer unit 3 is adapted to store information about the identity of a predetermined number of the most recent driver's licenses 2 which have been read by the card reader 1 together with information about at least the date, time and meter indication when the respective driver's licenses were  
15 read.

When this information is read from the memory, a driver's day-book is directly obtained for the respective authorized driver.

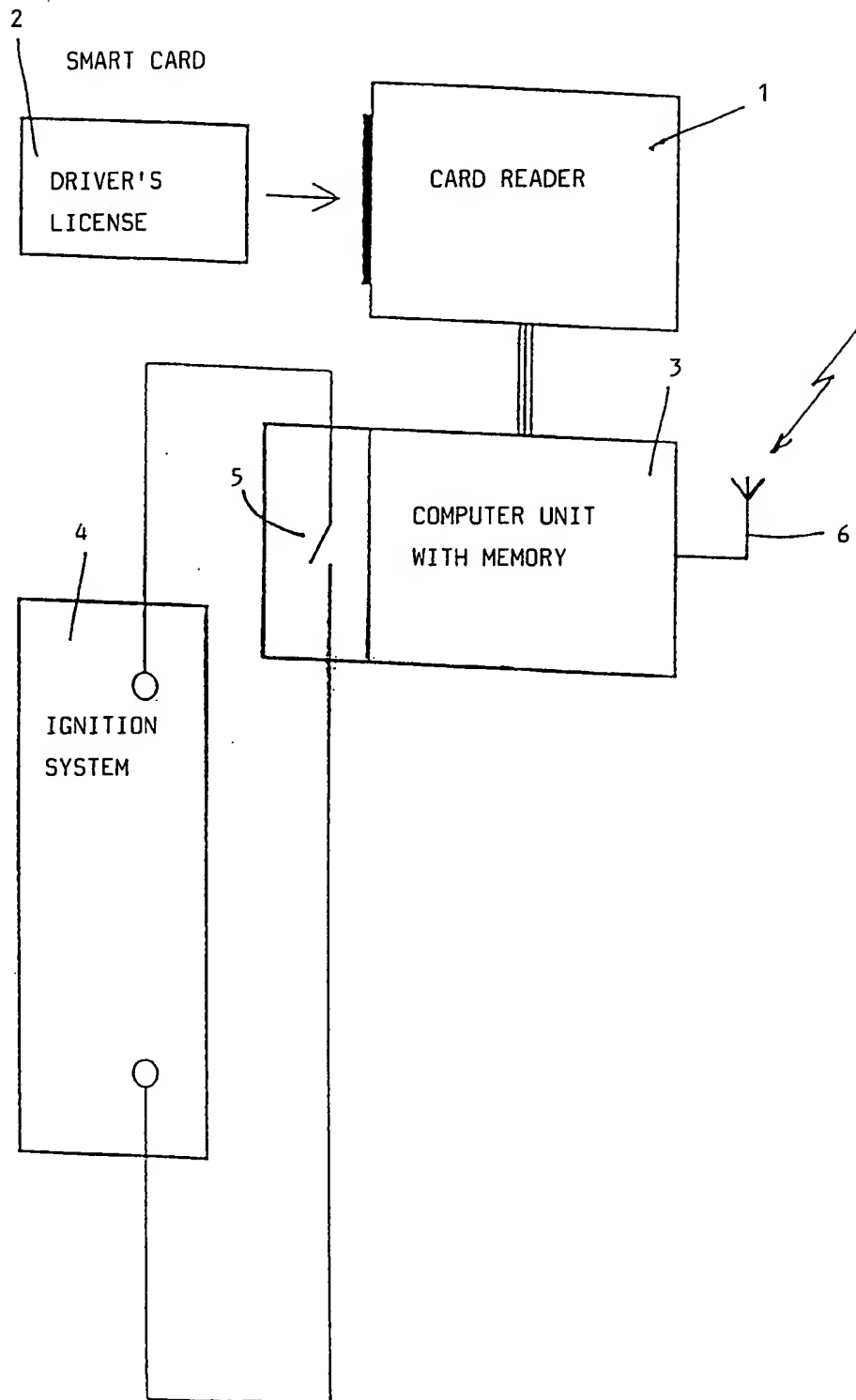
The authorization checking system can alternatively  
20 be so designed that the driver's license, operator card or vehicle card contains the code which gives authorization to the respective vehicle.

CLAIMS

1. Apparatus in an authorization checking system for a vehicle, comprising a checking unit (1, 3) which is adapted to check whether a driver's license, an operator card or a vehicle card (2), read by the checking unit (1, 3), is programmed in the checking unit (1, 3) as being authorized for driving the vehicle before start of the vehicle is enabled, **characterized in** that the checking unit (1, 3) is programmable by means of radio signals.

2 Apparatus according to claim 1, **characterized in** that the checking unit (1, 3) is adapted to store information about the identity of a predetermined number of the driver's licenses (2) most recently read by the checking unit (1, 3) together with information about at least the date, time and meter indication at the respective reading.

1/1





## INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 93/01008

## A. CLASSIFICATION OF SUBJECT MATTER

IPC5: B60R 25/04, G07C 5/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC5: B60R, G07C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO, A1, 8403785 (ERNST, HANS-HELMUT), 27 Sept 1984 (27.09.84), see the whole document --	1,2
Y	EP, A2, 0282339 (SECURITY SERVICES PLC), 14 Sept 1988 (14.09.88), column 2, line 60 - column 4, line 65 --	1
A	EP, A1, 0212842 (CITY WHEELS LIMITED), 4 March 1987 (04.03.87), page 6, line 23 - page 7, line 26 --	1,2

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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Date of the actual completion of the international search

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Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP, A1, 0139340 (KIENZLE APPARATE GMBH), 2 May 1985 (02.05.85), page 10, line 1 - page 15, line 27  -- -----	2

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

28/01/94

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Patent document cited in search report		Publication date	Patent family member(s)		Publication date
WO-A1-	8403785	27/09/84	DE-A-	3308803	13/09/84
			EP-A-	0135583	03/04/85
EP-A2-	0282339	14/09/88	GB-A,B-	2202354	21/09/88
			US-A-	4926665	22/05/90
EP-A1-	0212842	04/03/87	DE-A-	3682000	21/11/91
			GB-A,B-	2178211	04/02/87
			JP-A-	62063394	20/03/87
EP-A1-	0139340	02/05/85	DE-A-	3338113	09/05/85
			DE-A-	3473950	13/10/88
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